

4 desired direction simultaneously includes both a desired vertical component and a desired
5 horizontal component with respect to the cursor as displayed; and
6 • at least one processing means for interpreting and acting on the signals, the processing means
7 being adapted to perform at least the following operations:
8 ○ causing displacement of the cursor at a first speed relative to the display during a
9 predetermined time interval after activation of the user-interface means by the user;
10 and
11 ○ causing displacement of the cursor at a second speed relative to the display after the
12 predetermined time interval has elapsed,
13 whereby a desired cursor motion in the desired direction is achieved ergonomically.

CONT.

1 13. A user interface apparatus for use in a cursor control system, the apparatus comprising:
2 • a single direction manipulator — responsive to user manipulation — for specifying a desired
3 direction of cursor motion, which desired direction simultaneously includes both a desired
4 vertical component and a desired horizontal component with respect to the cursor as
5 displayed; and
6 • means for supplying signals representative of the desired direction and a desired speed, the
7 signals representing
8 ○ a first speed relative to the display during a predetermined time interval after
9 activation of the direction manipulator by the user; and
10 ○ a second speed relative to the display after the predetermined time interval has
11 elapsed,
12 whereby a desired cursor motion in the desired direction is achieved ergonomically.

1 14. The apparatus of claim 13, wherein:

2 • the first speed is a relatively low speed and the second speed is a relatively high speed; and

3 • the user-interface means and/or the processing means is operative to render at least a
4 relatively low speed or the relatively high speed variable in response to the user manipulating
5 the direction-manipulator.

1 15. The apparatus of claim 13, wherein the processing means or the user-interface means is
2 provided with respective counting means to count the number of events elapsed since the user-
3 interface means was last activated.

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1 16. The system of claim 12, wherein the user interface means comprises:

2 • at least one sensor for supplying at least one cursor motion specification signal, responsive to
3 the user manipulation,

4 • means for increasing a voltage as a function of time, responsive to the cursor motion
5 specification signal, and

6 • means for triggering an output signal when the voltage reaches a given level.

1 17. The system of claim 16, wherein the at least one sensor comprises a plurality of force
2 detectors.

Please amend the claims as follows:

1 3. The system of claim 12, wherein data transmission from the user-interface means to the
2 processing means involves a temporal basis in terms of repetitive events, and wherein the
3 processing means or the user interface means is operative to measure the predetermined time
4 interval in terms of the number of events.

1 4. The system of Claim 3, wherein

2 • the first speed is a relatively low speed and the second speed is a relatively high speed;

3 • a respective one of the respective events involves a respective update of a cursor position,

4 • the relatively low speed is effected by a relatively short displacement of the cursor per

5 update, and

6 • the relatively high speed is effected by a relatively large displacement of the cursor per

7 update.

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1 5. The system of claim 12, wherein

2 • the first speed is a relatively low speed and the second speed is a relatively high speed; and

3 • the user-interface means or the processing means is operative to render at least the relatively

4 low speed or the relatively high speed variable in response to the user manipulating the

5 direction-manipulator.

1 6. The system of claim 3, wherein the processing means or the user-interface means is provided
2 with a respective counting means to count the number of events elapsed since the user-interface
3 was last activated.